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## PART I - ADMINISTRATIVE

### Section 1. General administrative information

Title of project

Multi-Year Salmon Anadromous Fish Plan

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BPA project number: 20535

Contract renewal date (mm/yyyy): ☐ Multiple actions?

Business name of agency, institution or organization requesting funding

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Business acronym (if appropriate) CBFWA

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Proposal contact person or principal investigator:

Name Tom Giese

Mailing Address

City, ST Zip

Phone 503-229-0191

Fax

Email address

NPPC Program Measure Number(s) which this project addresses

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FWS/NMFS Biological Opinion Number(s) which this project addresses

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Other planning document references

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Short description

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Target species

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### Section 2. Sorting and evaluation

Subbasin

Salmon

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#### *Evaluation Process Sort*

CBFWA caucus	Special evaluation process	ISRP project type
Mark one or more caucus	If your project fits either of these processes, mark one or both	Mark one or more categories
<input type="checkbox"/> Anadromous fish	<input type="checkbox"/> Multi-year (milestone-based	<input type="checkbox"/> Watershed councils/model watersheds

<input type="checkbox"/> Resident fish <input type="checkbox"/> Wildlife	evaluation) <input type="checkbox"/> Watershed project evaluation	<input type="checkbox"/> Information dissemination <input type="checkbox"/> Operation & maintenance <input type="checkbox"/> New construction <input type="checkbox"/> Research & monitoring <input type="checkbox"/> Implementation & management <input type="checkbox"/> Wildlife habitat acquisitions
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### Section 3. Relationships to other Bonneville projects

***Umbrella / sub-proposal relationships.*** List umbrella project first.

Project #	Project title/description
20535	MYP Salmon Anadromous Fish Plan
9009	Restore healthy riparian corridor along 12 mi. of Salmon River.
9202603	Support Idaho Model Watershed administration and coordination.
9401700	Implement habitat restoration in Lemhi, Pahsimeroi, East Fork drainages.
9405000	Habitat enhancement/restoration at multiple sites, conduct O&M and M&E
9202408	Implement tribal law enforcement activities to protect fishery.
9401500	Construction/maintenance of screens, pumps, fish ladders, surveys.
9600700	Eliminate 3 diversions and install pump on Salmon River.
9306200	Habitat enhancement to increase flow, reduce barriers, restore riparian veg
9401700	Habitat enhancement to increase flow, reduce barriers, restore riparian veg
9604300	Increase survival of weak summer chinook stocks on Johnson Creek.
9705700	Implement side stream incubation and captive broodstock rearing.
9700100	Implement side stream incubation and captive broodstock rearing.
9606700	Implement side stream incubation and captive broodstock rearing.
9801002	Captive rearing monitoring.
9703800	Preserve chinook gametes by cryo-preservation.
9703000	Compare adult chinook returns via passive underwater video.
8909800	Evaluate usefulness of supplementation as recovery/restoration method.
8909801	Evaluate usefulness of supplementation as recovery/restoration method.
8909802	Evaluate usefulness of supplementation as recovery/restoration method.
8909803	Evaluate usefulness of supplementation as recovery/restoration method.
9005500	Evaluate usefulness of supplementation as recovery/restoration method.
9107300	Continue monitoring natural production in Salmon & Clearwater subbasins.
9064	Describe factors influencing distribution/persistence of wild chinook
9107100	Determine sockeye carrying capacity for nursery lakes in Salmon basin.
9107200	Captive rearing to aid in recovery of Stanley Basin sockeye.
9204000	Captive rearing to aid in recovery of Stanley Basin sockeye.

#### ***Other dependent or critically-related projects***

Project #	Project title/description	Nature of relationship

## Section 4. Objectives, tasks and schedules

### *Past accomplishments*

Year	Accomplishment	Met biological objectives?

### *Objectives and tasks*

Obj 1,2,3	Objective	Task a,b,c	Task
1	Improve adult holding and pre-spawning survival.	a	Improve habitat and riparian areas.
		b	Improve adult and juvenile passage at irrigation diversions.
2	Improve spawning success and survival to emergence.	a	Improve habitat and riparian areas.
		b	Improve adult and juvenile passage at irrigation diversions.
3	Improve juvenile rearing and over-wintering survival.	a	Improve habitat and riparian areas.
		b	Improve adult and juvenile passage at irrigation diversions.
4	Improve summer parr survival.	a	Improve habitat and riparian areas.
5	Supplement where needed with genetically-appropriate salmon and steelhead in the subbasin using stock specific escapement criteria capable of maintaining stock productivity, survival and genetic diversity.	a	Supplement with local broodstock.
		b	Research and monitor to evaluate supplementation.
		c	Increase Redfish Lake sockeye and re-introduce to Sawtooth area lakes.
		d	Release hatchery produced juveniles to provide harvest opportunities.

### *Objective schedules and costs*

Obj #	Start date mm/yyyy	End date mm/yyyy	Measureable biological objective(s)	Milestone	FY2000 Cost %
				<b>Total</b>	0.00%

### *Schedule constraints*

Completion date

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## Section 5. Budget

FY99 project budget (BPA obligated):

### *FY2000 budget by line item*

Item	Note	% of total	FY2000
Personnel		%0	
Fringe benefits		%0	
Supplies, materials, non-expendable property		%0	
Operations & maintenance		%0	
Capital acquisitions or improvements (e.g. land, buildings, major equip.)		%0	
NEPA costs		%0	
Construction-related support		%0	
PIT tags	# of tags:	%0	
Travel		%0	
Indirect costs		%0	
Subcontractor		%0	
Other		%0	
TOTAL BPA FY2000 BUDGET REQUEST			\$ 0

### *Cost sharing*

Organization	Item or service provided	% total project cost (incl. BPA)	Amount (\$)
		%0	
		%0	
		%0	
		%0	
Total project cost (including BPA portion)			\$ 0

### *Outyear costs*

	FY2001	FY02	FY03	FY04
Total budget				

## Section 6. References

Watershed?	Reference
<input type="checkbox"/>	Draft Multi-Year Anadromous Fish Plan, CBFWA, February 4, 1998
<input type="checkbox"/>	FY1999 Draft Annual Implementation Work Plan, Vol. 1 Tab. 5, CBFWA May 13, 1998
<input type="checkbox"/>	

<input type="checkbox"/>	
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## **PART II - NARRATIVE**

### **Section 7. Abstract**

(Replace this text with your response in paragraph form)

### **Section 8. Project description**

#### **a. Technical and/or scientific background**

(Replace this text with your response in paragraph form)

#### **b. Rationale and significance to Regional Programs**

The Salmon River Subbasin spans across central Idaho, covering more than 14,000 square miles. It is the second largest subbasin in the Columbia River drainage. The largest is the Snake. The Salmon River flows from its headwaters 410 miles to the Snake. Most of the precipitation in the basin falls as snow, with peak streamflows during April and June due to snowmelt. There are no major barriers to anadromous fish, although drainage from mining and irrigation diversions pose limitations on some tributaries.

The U.S. Forest Service is the largest landholder in the subbasin, with almost 80 percent of the area within six national forests. The largest tract of wilderness in the lower 48 states is within the subbasin. Only 8 percent of the area is privately owned, but the private owners control essential water rights. Major land uses in the subbasin are forestry, recreation, wilderness, agriculture and grazing.

The indigenous anadromous fish species most actively targeted for management in the Salmon River Subbasin are fall chinook, spring/summer chinook, coho (extirpated), sockeye, and Group A and Group B summer steelhead. The goal for these species is to restore sustainable, naturally producing populations to support tribal and non-tribal harvest and cultural and economic practices while protecting the biological integrity and the genetic diversity of the watershed.

Resource problems include irrigation diversions that have reduced the carrying capacity of some streams by reducing the rearing and spawning area through disconnecting tributary streams from mainstem corridors. De-watered habitat and increased water temperatures, particularly in the upper Salmon (Lemhi, Pashimeroi, and East Fork) and in the Little Salmon have also diminished carrying capacity. Many irrigation diversions present impediments to adult migrants. Also unscreened and inadequately screened diversions are major sources of mortality to juveniles. Overgrazing and channelization has reduced riparian vegetation over much of the headwater rearing areas contributing to increased water temperatures and sedimentation. These problems have caused major habitat fragmentation resulting in poor connectivity. Between freshwater habitat loss and mainstem passage problems in the Snake and Columbia rivers sockeye and coho have been extirpated, and spring and summer chinook and summer steelhead have been significantly diminished. All of this has contributed to under-seeded habitat, reductions in production and loss of harvest opportunities.

#### **c. Relationships to other projects**

Lower Snake Compensation Plan and Idaho Power Company mitigation has been funding efforts to release hatchery produced juveniles to provide hatchery broodstock, supplementation of natural production, and to provide harvest opportunities.

#### **d. Project history (for ongoing projects)**

(Replace this text with your response in paragraph form)

**e. Proposal objectives**

In order to address these problems, the co-managers have adopted the following outcome-based objectives: 1) improve adult holding and pre-spawning survival; 2) improve spawning success and survival to emergence; 3) improve juvenile rearing and over-wintering survival; 4) improve summer parr survival; and, 5) supplement where needed with genetically-appropriate salmon and steelhead in the subbasin using stock specific escapement criteria capable of maintaining stock productivity, survival and genetic diversity.

General strategies to achieve these objectives include improving habitat and riparian areas; improving adult and juvenile passage at irrigation diversions; supplementing naturally spawning populations with local broodstock to enhance natural production (includes research & monitoring to evaluate supplementation); using captive broodstock techniques to increase numbers of Redfish Lake sockeye and re-introduce to Sawtooth area lakes; and releasing hatchery produced juveniles to provide harvest opportunities.

Specific actions to carry out these strategies include project #9009 which will restore a healthy riparian corridor along 12 miles of the Salmon River near Challis, Idaho and restoring the natural floodplain. Project #9202603 supports Idaho Model Watershed administration and coordination; and project #9401700 implements habitat restoration in the Lemhi, Pahsimeroi and East Fork drainages. Project #9405000 is a habitat enhancement project on Bear Valley Creek, the Yankee Fork and East Fork of the Salmon River that includes implementing habitat restoration and conducts O&M and M&E of major past investments. Project #9202408 would fund tribal law enforcement activities to protect the fishery resource from and man-caused habitat degradation.

Project #9401500 is responsible for the construction and maintenance of screens, consolidation of diversions and replacement of diversions with pumps, construction of fish ladders, and conducting pump and diversion surveys. Project #9600700 is in the process of eliminating three diversions in the Salmon River through consolidations and installing a pump on the Salmon River to replace Lemhi River water during times of critical fish passage needs on the Lemhi River. Projects #9306200 and #9401700 are habitat enhancement projects on the Lemhi, Pashimeroi and East Fork of the Salmon River designed to increase flow, reduce physical barriers to migration and restore riparian vegetation.

Project #9604300 is a small-scale supplementation project designed to increase survival of a weak but recoverable stock of summer chinook on Johnson Creek on the South Fork of the Salmon River. Project #9705700 is a supplementation project for chinook and steelhead that includes side stream incubation, and captive broodstock/rearing in conjunction with projects #9700100 and #9606700. Captive rearing monitoring is included in project #9801002. Project #9703800 preserves chinook salmon gametes by cryo-preservation to maintain genetic diversity in a small population. Project #9703000 uses passive underwater video to compare adult chinook returns to supplemented and unsupplemented streams to evaluate supplementation. Projects #8909800, #8909801, #8909802, #8909803, and #9005500 are designed to evaluate the usefulness of supplementation as a recovery/restoration measure for depressed stocks of spring and summer chinook and summer steelhead in the Salmon and Clearwater subbasin streams. Project #9107300 funds continuing monitoring of natural production throughout the Salmon and Clearwater subbasins. Project #9064 will attempt to describe factors influencing the spatial distribution and persistence of wild chinook salmon based on the emerging conservation theory that suggests that recolonization and persistence of widely ranging species may be strongly influenced by the spatial geometry of remaining habitats.

Project #9107100 is funded to determine the sockeye carrying capacity for nursery lakes in the Salmon River basin and to improve the lake habitat. Projects #9107200 and #9204000 are captive rearing projects to aid in recovery of Stanley Basin sockeye.

**f. Methods**

(Replace this text with your response in paragraph form)

**g. Facilities and equipment**

(Replace this text with your response in paragraph form)

**h. Budget**

(Replace this text with your response in paragraph form)

**Section 9. Key personnel**

(Replace this text with your response in paragraph form)

**Section 10. Information/technology transfer**

(Replace this text with your response in paragraph form)

**Congratulations!**